

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently amended) A method for data-flow protection of an optical interface in a protected device, comprising the steps of:

(1) receiving an optical signal from a source-neighboring device; ~~by the protected device;~~

(2) duplicating the optical signal into at least two duplicated optical signals: a first duplicated optical signal and a second duplicated optical signal,

sending the first duplicated optical signal to ~~at~~ the protected device for processing, and

sending directly the second duplicated optical signal to be selected;

(3) ~~according to receiving a working status signal output of the generated by the protected device and an output optical-signal from the protected device, and selecting one from the second duplicated optical-signal and the output optical-signal of the protected device according to the working status signal output of the protected device, and sending the selected one to a destination-neighboring device.~~

2. (Currently amended) The method according to Claim 1, wherein ~~step (3)~~ receiving a working status signal output comprises, if working status signal output of the protected device is normal, ~~then selecting the output optical-signal~~ optical-signal output of the protected device and sending the output optical-signal to the destination-

neighboring device; if the ~~protected device working status in step (3)~~working status
signal output of the protected device is abnormal, ~~then selecting the second duplicated~~
optical-signal directly and sending it to the destination-neighboring device.

3. (Cancelled).

4. (Original) A data-flow protection device of an optical interface in a protected device, comprising:

a first optical-signal duplicating unit and an optical-signal selecting unit;

wherein an input of the first optical-signal duplicating unit is connected to a source-neighboring device for receiving an optical-signal, one output of the first optical-signal duplicating unit is directly connected to one input of the optical-signal selecting unit, another output of the first optical-signal duplicating unit connects to input of a protected device;

wherein another input of the optical-signal selecting unit is connected to optical-signal output of the protected device, the control end of the optical-signal selecting unit is connected with working status signal output of the protected device, the output of the optical-signal selecting unit connects to a destination-neighboring device.

5. (Cancelled).

6. (Currently amended) The data-flow protection device according to Claim 59, wherein the optical power detecting unit comprises an optical-electrical conversion diode, an operational amplifier and an analog comparator;

wherein the optical-electrical conversion component receives optical-signal outputted by the second optical-signal duplicating unit, converts the optical-signal to an electrical signal and output the electrical signal to the operational amplifier;

the analog comparator receives the amplified electrical signal from the operational amplifier, compares with a preset threshold value, outputs a control signal to one input of the logic module control.

7. (Original) The data-flow protection device according to Claim 4, wherein the optical-signal duplication unit is an optical splitter, and the optical-signal selecting unit is an optical switch.

8. (New) A method for data-flow protection of an optical interface in a protected device comprising:

receiving an optical signal from a source-neighboring device;

duplicating the optical signal into at least two duplicated optical signals: a first duplicated optical signal and a second duplicated optical signal;

sending the first duplicated optical signal to the protected device for processing;

sending directly the second duplicated optical signal to be selected;

receiving a working status signal output of the protected device and an output optical-signal of the protected device from the protected device;

re-duplicating the output optical-signal of the protected device into at least two re-duplicated optical signals;

if the working status signal output of the protected device is normal and if an optical power of one of the two re-duplicated optical signals is not lower than a preset threshold value, selecting another re-duplicated optical signal to the destination-neighboring device;

if the working status signal output of the protected device is normal and the optical power of one of the two re-duplicated optical signals is lower than a preset threshold value, selecting the second duplicated optical signal directly and sending it to the destination-neighboring device;

if the working status signal output of the protected device is abnormal, selecting the second duplicated optical signal directly and sending it to the destination-neighboring device.

9. (New) A data-flow protection device of an optical interface in a protected device comprising:

a first optical-signal duplicating unit, an optical-signal selecting unit, a second optical-signal duplicating unit, an optical power detecting module and a logic module;

wherein input of the first optical-signal duplicating unit is connected to a source-neighboring device for receiving an optical-signal, one output of the first optical-signal duplicating unit is directly connected to one input of the optical-signal selecting unit, another output of the first optical-signal duplicating unit connects to input of a protected device;

wherein optical-signal output of the protected device is connected to input of the second optical-signal duplicating unit, one output of the second optical-signal duplicating unit connects to the optical-signal selecting unit, another output of the second optical-signal duplicating unit connects to the input of the optical power detecting module;

wherein output of the optical power detecting module is connected to one input of the logic module, another input of the logic module is connected to working status signal output of the protected device, and the output of the logic module connects to a control end of the optical-signal selecting unit, the output of the optical-signal selecting unit connects to a destination-neighboring device.